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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,932	11/13/2003	Chunqiang Tang	200308654-1	6564
22879 7590 09/03/2008 HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			EXAMINER HICKS, MICHAEL J	
			ART UNIT 2165	PAPER NUMBER
			NOTIFICATION DATE 09/03/2008	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/705,932	<b>Applicant(s)</b> TANG ET AL.	
	<b>Examiner</b> Michael J. Hicks	<b>Art Unit</b> 2165	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 July 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4, 6-22 and 24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-22, and 24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Claims 1-4, 6-22, and 24 Pending.

Claims 5 and 23 Canceled.

### ***Response to Arguments***

2. Applicant's arguments filed 7/3/2008 have been fully considered but they are not persuasive.

As per Applicants arguments that the query-flooding described by Xu fails to disclose the limitation of 'identifying and selecting, based on the samples received from the first set of nodes, a first node of the first set of nodes likely storing information associated with objects stored in the peer-to-peer system that are relevant to the query', Examiner respectfully disagrees. Examiner notes that the section clearly indicates that query is received at a destination node determined to be relevant to the query, and based on the semantic vector of the query and the semantic vectors of surrounding nodes, which the destination node has access to (e.g. basing the radius of the flooding on a similarity threshold), at least a first node of the first set of nodes is chosen and the query is forwarded to at least that node. Examiner notes that indicating that a first node is selected in this manner does not preclude additional nodes being selected, and therefor does not disqualify the use of a radius based on a semantic vector similarity threshold as disclosing the claimed limitation.

In light of the above arguments the rejection will be updated to reflect amendments made to the claims and maintained.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-4, 6-22 and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Xu et al. (US 7,039,634 B2). The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

As per claims 1, 14 and 18 Xu et al. is directed to executing a search in a peer-to-peer system, the method comprising: receiving a query at a destination node (column 4, lines 31-37); receiving samples from a first set of nodes proximally located to the

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destination node in an overlay network for the peer-to-peer system, the samples associated with information stored at the proximally located nodes (column 3, lines 16-31 ; column 4, lines 36-42, wherein "samples" could be any object or information in the system); and identifying and selecting, based on the samples received from the first set of nodes, a first node of the first set of nodes likely storing information associated with objects stored in the peer-to-peer system that are relevant to the query (column 4, lines 39-42). forwarding the query to the identified first node (column 4, lines 31-42); generating semantic vectors for the objects stored in peer-to-peer system (column 3, line 51 ); hashing each of the semantic vectors to generate keys identifying locations in the overlay network to store key-value pairs for the objects, wherein the keys are semantic vectors for objects and the values include at least one of the objects and addresses for the objects (column 3, lines 18-20; column 4, lines 11-16); and storing the key-value pairs at the nodes associated with the identified locations in the overlay network wherein the stored key-value pairs associated with similar vectors are proximally located in the overlay network (column 4, lines 16-23).

As per claims 2, 15 and 19 Xu et al is directed further comprising: comparing the query to information stored in the first node; wherein the information stored in the first node is associated with objects stored in the peer-to-peer network (column 4, lines 39-42); and generating search results including information stored in the first node associated with objects relevant to the query based on the comparison of the query to the information stored in the first node (column 9, lines 50-57).

As per claims 3, 16 and 20 Xu et al is directed to further comprising: determining whether a quit threshold has been reached (column 9, lines 66-67); transmitting the search results to an initiator of the query in response to the quit threshold being reached (column 9, lines 64-65); and performing the following steps in response to the quit threshold not being reached: identifying a second node likely storing information associated with objects stored in the peer-to-peer network that are relevant to the query based on samples received from a second set of nodes including the second node, wherein the second set of nodes are nodes proximally located to the first node in the overlay network (column 9, lines 59-64); and adding information stored in the second node to the search results; the added information being associated with objects that are relevant to the query (column 9, lines 59-64).

As per claims 4, 17 and 21 Xu et al is directed to wherein the quit threshold is associated with at least one of hops in the overlay network and whether the search results can be improved by adding information to the search results from the second node (column 4, lines 23-26).

As per claim 6 Xu et al. is directed to generating the samples for the first set of the nodes as a function of at least one of key-value pair stored at each of the first set of nodes (column 4, lines 1-4).

As per claim 7 Xu et al. is directed to wherein generating the samples comprises: generating a destination node semantic vector representative of objects associated with at least one of key-value pairs stored at the destination node and recent queries executed by the destination node (column 3, lines 16-23).

As per claim 8 Xu et al. is directed to wherein identifying, based on the samples received from the first set of nodes, a first node of the first set of nodes likely storing information associated with objects stored in the peer-to-peer network that are relevant to the query comprises: generating a semantic vector for each of the samples for the first set of nodes (column 5, lines 18-23); comparing the destination node semantic vector to each of the semantic vectors for the first set of nodes (column 5, lines 45-54); and identifying one of the semantic vectors for the first set of nodes closest to the destination node semantic vector (column 5, lines 45-54).

As per claim 9 Xu et al. is directed to further comprising: identifying lower elements for the semantic vectors (column 5, lines 11-14) generating planes in the overlay network associated with the lower elements (column 5, lines 11-14); performing the steps of claim 1 for each of the plains (see citations above).

As per claim 10 Xu et al. is directed to further comprising: storing indices of key-value pairs at the nodes (column 4, lines 20-23), replicating an index for a second node in the first node, wherein the second node is proximally located to the first node in the

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overlay network (column 4, lines 20-23); and identifying key-value pairs from the replicated index that are relevant to the query (column 4, lines 21-22).

As per claim 11 Xu et al. is directed to further comprising: storing indices of key-value pairs at the nodes (column 4, lines 20-23), in the first node, replicating indices for a plurality of nodes in a region in the overlay network including the first node (column 4, lines 20-23); and identifying key-value pairs from the replicated indices that are relevant to the query (column 4, lines 21-22).

As per claim 12 Xu et al is directed to wherein the first set of nodes are neighbor nodes to the destination node in the overlay network (column 4, lines 23-25).

As per claim 13 Xu et al is directed to wherein the second set of nodes are neighbor nodes to the first node in the overlay network (column 4, lines 23-25).

As per claim 22 Xu et al is directed to a peer-to-peer system comprising: a plurality of nodes in the system operating as a search engine operable to execute a query received by the search engine, each of the plurality of nodes comprising a storage device to store information (column 4, lines 32-36); an overlay network implemented by the plurality of nodes (column 6, lines 47-48); a plurality of indices stored at the plurality of nodes, each index including at least one semantic vector for an object (column 4, lines 20-23); and the semantic vectors is being hashed to generate keys



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identifying location in the overlay network to store key-value pairs for objects (column 3, lines 18-20; column 4, lines 11-16), wherein the keys are the semantic vectors for the objects and the values include at least one of the objects and addresses for the object (column 3, lines 18-20), wherein the key-value pairs are stored at the nodes associated with the identified locations in the overlay network, and the stored key-value pairs are associated with similar semantic vectors are proximally located in the overlay network (column 4, lines 16-23); wherein a first node in the search engine is configured to receive samples from the nodes proximally located to the first node in the overlay network, the first node utilizing the samples to identify and select an index of one of the other nodes to search in response to receiving the query (column 4, lines 39-42).

As per claim 24 Xu et al is directed to wherein the first node is located in a region in the overlay network and the first node is configured to store indices from nodes in the region, such that the first node is operable to search a plurality of indices likely to include information relevant to the query without forwarding the query to other nodes in the region (column 4, lines 14-23; the word "operable to" should be changed to "configured to").

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Points of Contact***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Hicks whose telephone number is (571) 272-2670. The examiner can normally be reached on Monday - Friday 9:00a - 5:30p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christian Chace can be reached on (571) 272-4190. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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